0.00

Memo

Packaging

Packaging

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date													
Mork Ords				****		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Work Orde Part N NCR N	 No					Rework Scrap Use-as-is Work Order Update		!	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator													
Material							1						
Setup	\Box												
Other												•	
Process									•				
Supplier													
Training													
Unapproved							<u> </u>				l		
							AUL	T CATE	GORY				
Landir I						General		1			1		1 ₀ / ₅ /
	_	ending			- (c	Bend	<u> </u>	Grain		<u> </u>	Ovalized	A-1	Pressure/Forced
	_	entre No	t Concer	itric to	^{3/S}	BOM/Route	-	Hardwa			Over/Under	⊢	Temperature/Cure Weld
	_	racks	٠			Broken/Damaged	\vdash	4	on Incomplete	l Inglant	Part Incorred Part Lost/Mi	_	Wrong Stock Pulled
	_	rushed/C uffs	.rimpea.		-	Burrs	-	Mainte	ions Incomplete/	Unclear	Part Lost/Mil	issing	I wrong stock Pulled
	—	arrs eat Treat			<u> </u>	Contamination Countersink	-	Mislabe			Positioned V	Mrong	
}	_	spection		Tube	<u> </u>	Cut Too Short	-	Misread			Power Loss/		Other
}		pples in		une		Drill Holes		Offset	A		1. 0.0001 1033/		Totale
ŀ	_	orque Wa		xtrusio	, -	Drawing		4	Calibration				
Ì		irning Se		35.01		Finish		4	Sequence				

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord January-25-13				*962					Page 2	_			
Item ID: Revision ID:	D4148-041	I		Accept	*N900	040	100)*	Setup	Start		S1*	
Item Name:	Crosstube L	ug Assembly, Fwd								Stop	*N	S2*	
Start Date:	1/21/13	Start Qty: 4.00	*4*		Cust Item I	D:							
Required Date	: 2/08/13	Req'd Qty: 4.00	*4*		Customer:								
Reference:			_										
Approvals:	Process P	Plan:	Date:	Tooling:	D:	ate:			Run	Start	*N	R1*	
	QC:		Date:	SPC (Y/N):	Da	ate:				Stop	*N	R2*	
Sequence ID/ Work Center 1	ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re Qt	•	Reject Nymber	Insp. Stamp	
130		QC21- Final Inspection	- Work Order Release	0.00					1.	2/2	low	$\mathcal{A}\mathcal{V}$	/
130		Memo		0.00					<u> </u>	717	128	7	

Quality Control

MF 3 28

									DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-O	CONFOR	MANCE / UP	PDATE	QA Closed:	Date:	
	·				<u> </u>					******	
Work Orde	or.				DISPOSITION	- 1	·	AGAINST DE	PARTMENT	/PROCESS	
Work Orac					Rework	1	Skid-tube	Crosstube]	Water Jet	Engineering
Part N	lo.				Scrap	1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is	Ther	moforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	lo				Work Order Update]	Large Fab	Composite	_	Supplier	
Root				Descri	ption of work order update	Initial	· Ac	ction	Sign &		
Cause	Date	Step	Qty	C	or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator							1				
Material											
Setup											
Other											
Process											
Supplier											
Training		1									
Unapproved				-							
					F	AULT CATE	GORY				
Landi	ng Gear				General				-	_	¬
	Bending				Bend	Grain		_	Ovalized	<u> </u>	Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route	Hardw	are		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspec	tion Incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped.			Burrs	Instruc	tions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled
[Cuffs				Contamination	Maint	enance		Part Moved		
	Heat Trea	at			Countersink	Mislab	eled		Positioned \	Wrong	_
[Inspectio	n Strip in	Tube		Cut Too Short	Misrea	d		Power Loss,	/Surge	Other
	Ripples in Bend				Drill Holes						

Out of Calibration

Outside Dimensions

Out of Sequence

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

January-25-13 8:56:09 AM

Work Order ID:

96210

Parent Item:

D4148-041

Parent Item Name:

Crosstube Lug Assembly, Fwd

Start Date: 1/21/13

Required Date: 2/08/13

Page 1

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:A 10.06.24 new issue DD verf:EC

IPP Rev:B 10.07.22 as per revB DD verf:JLM

IPP Rev:C 10.10.29 as per revC

DD verf:EC

IPP REV:D 11.03.02 AS PER DWG REV.D DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MS21043-3		Purchased	No			100	Each	761.0000	4	8	$m\Omega$	1150	Son
Nut											11/10	4 5	<u> </u>
				Location		Loc Qty	Lo	oc Code					
				FG		80							
				10	3691	80							
				FP001		47							
				12	3525	47							
				GA		185							
				12	3899	185							
				ST315		449							
				11	8614	7							
					8686	30							
					9758	20							
•					1255	16							
					2993	137							
				12	3899	239			***************************************				~
MS21043-4 Nut		Purchased	No			100	Each	1,509.0000) 1	\mathbb{S}^{2}	> 13-	3-1	× ·
				Location		Loc Oty	Lo	oc Code		•			
				FG		36							
				10	14603	36				 			
				GA		148							
				12	1652	148			-				
•				ST315		1325							
					1162	25							
					23021	500							
					23525	200			— <u>i</u>				
				. 12	23900	600			_[c	/ -><			

									DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-C	ONFO	RMANCE / U	PDATE		Data	
·····	***								QA Closed:	Date:	
Work Orde	or:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
WOIK Orde					Rework		Skid-tube	Crosstube	1	Water Jet	Engineering
Part N	lo.				Scrap		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is	The	ermoforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	lo				Work Order Update		Large Fab	Composite]	Supplier	
Root				Descri	otion of work order update	Initia	Ι Δ	action	Sign &		
Cause	Date	Step	Qty	c	or Non-conformance	Chief E	ng Des	scription	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator [
Material							j				
Setup											
Other									İ		
Process						1					
Supplier											
Training [
Unapproved									<u> </u>		
					F	AULT CA	TEGORY		· · · · · · · · · · · · · · · · · · ·		<u> </u>
Landir	ng Gear				General			_	_	_	7
	Bending				Bend	Grai	n		Ovalized	_	Pressure/Forced
	Centre No	ot Concer	ntric to (o/s	BOM/Route	Harc	lware		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Insp	ection Incomplete		Part Incorre	ct	Weld
	Crushed/Crimped Burrs			Burrs	Instr	uctions Incomplete	e/Unclear	Part Lost/M	issing	Wrong Stock Pulled	
	Cuffs				Contamination	Mai	ntenance		Part Moved		
[Heat Trea	at			Countersink	Misl	abeled		Positioned \		· .
	Inspectio	n Strip in	Tube		Cut Too Short	Misr	ead		Power Loss/	'Surge	Other
	Ripples in	Bend			Drill Holes	Offs	et				

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

January-25-13 8:56:09 AM

Work Order ID:	96210								•
Parent Item:	D4148-041							Date: 1/21/13	Required Date: 2/08/13
Parent Item Name:	Crosstube Lug Asser	mbly, Fwd					Start	Qty: 4.00	Required Qty: 4.00
D2690-6 Lanyard Assembly		Manufactured	No		100	Each	24.0000	1	4,13972748
				Location	Loc Qty		Loc Code		
· ·				ST014	24			-	_
				94196	4				_ :
				94775	20				_
03910-1 Crosstube Lug		Manufactured	No		100	Each	42.0000	1	4 50
_				Location	Loc Qty		Loc Code		•
				ST464	42				
				81474	2				_
				87270	9				
				89772	1				_
				93755	30			\ \\	_
04091-1		Manufactured	No	**************************************	100	Each	15.0000	1	4, B975M8
Mounting Lug									470175178
				Location	Loc Qty		Loc Code		
				ST144	15				<u> </u>
				93232	15				_
04148-1		Manufactured	No		100	Each	17.0000	2	800000
Crosstube Lug Plate, Fw	⁄d							(D)	(1) 1 7 30 7 8Y
				Location	Loc Qty		Loc Code		
•				ST145	17				- 2970/g
				857,53	2				_ 5/7907/
				92488	7				
				92805	8				1 X
D4148-3		Manufactured	No	0	100	Each	10.0000	1	4 \$ 13-3-18.
Stud Receiver, Lower		•						-	_ 5/2/2/18
				Location	Loc Oty		Loc Code	2×3	97611
				ST145	10			+-	1 4211
i				93419	10			2v	_

NCR:	Yes	/ No				WORK ORDER NON-O	O	NFORM	ANCE / UPI	DATE		·	-		
			_									QA Closed:	Da	te:	
Work Ord	er.				-	DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
Part I	No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		4	Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update		nitial	Act	ion		Sign &			
Cause		Date	Step	Qty	C	or Non-conformance	Ch	ief Eng	Descr	iption		Date	Verificatio	n	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
	11			<u> </u>		F.	AUL	T CATE	GORY			<u> </u>	<u> </u>		· · · · · · · · · · · · · · · · · · ·
Landi	ng G	iear				General									
		Bending Centre No Cracks Crushed/C Cuffs Heat Trea Inspectior	Crimped. t		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misreac	on Incomplete ions Incomplete/U nance led	Jnclear		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ct issing Vrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Ripples in	Bend		1	Drill Holes		Offset							

Out of Calibration

Out of Sequence

Outside Dimensions

Date:

DQA:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

January-25-13 8:56:10 AM

Work Order ID:	96210							
Parent Item:	D4148-041					Start I	Date: 1/21/13	Required Date: 2/08/13
Parent Item Name:	Crosstube Lug Assembly, Fwd					Start	Qty: 4.00	Required Qty: 4.00
D4148-5 Eyebolt Stud	Manufactured	No		100	Each	10.0000	1	13 B97587 8F
			Location	Loc Qty		Loc Code		
			ST145	10				
			94187	10			_/X_	
AN3C12A Bolts	Purchased	No		100	Each	15.0000	2	8
			Location	Loc Qty		Loc Code	mb	4561
			GA	15				
			122416	15				
AN4C13A BOLT	Purchased	No		100	Each	176.0000	3 4 x	(m)20425
			Location	Loc Oty		Loc Code	·	* .
			ST356	116				
			123900	116				
			ST516	60				
			124215	60			8	
MS17984-C413 PIN, QUICK RELEASE	Purchased	No		100	Each	45.0000	1	4 88
:			Location	Loc Oty		Loc Code		
			ST332	5				
•			118612	2				
			123901	3				<u> </u>
			ST508	40			1/2	<u></u>
			124231	40			_7X	
MS20615-4M18 Rivet	Purchased	No		100	Each	214.0000	8 	n 124859
			Location	Loc Oty		Loc Code		SP13-3-18.
			GA	7				
			122452	7			-	
			ST312	207				
			123390	22			·	<u></u>
			124331	185				
January-25-13 8:56	6:10 AM		Shop P	Packet Print				Page 3

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORN	AANCE / UPD		QA Closed:	Date	:
		*****				DISPOSITION				AGAINST DE			
Work Orde Part N	 No					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root	<u> </u>				Descri	ption of work order update		Initial	Actio	on	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descrip	otion	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUL	T CATE	GORY				
Landi	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube					General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		4 '	on Incomplete ions Incomplete/Ur nance led		Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	F	Ripples in	Bend			Drill Holes		Offset					

Out of Calibration
Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

January-25-13 8:56:10 AM

Work Order ID: Parent Item:	96210 D4148-041						Start D	ate: 1/21/13	Required Date: 2/08/13
Parent Item Name:	Crosstube Lug Asso	embly, Fwd					Start (Qty: 4.00	Required Qty: 4.00
NAS1149C0332R Washer		Purchased	No		100	Each	7,881.0000	4	16
			L	ocation	Loc Qty		Loc Code		
			F	P001	302				
				123355	302			***************************************	
			S	T292	7579				
				123248	41				
				123759	7538			/6	¥ _
NAS1149C0432R Washer		Purchased	No		100	Each	3,084.0000	6	124 SP/3-3-18
			Ī	ocation .	Loc Qty		Loc Code		
			C	GA	65				
				12.1255	65				
			S	ST292	3019				
				119124	19				/ _
				122441	3000			_24	<u>l V</u>

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	NFORM	MANCE / UP	DATE			
											QA Closed:	Date:	
Work Ord	or:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
WOIK OIG	CI.					Rework			Skid-tube	Crosstube]	Water Jet	Engineering
Part	No.	*				Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is]	Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR	No.					Work Order Update	J		Large Fab	Composite	j	Supplier	
D 4			 	T	Doscri	ption of work order update		nitial	Λ.	ction	Sign &	1	
Root Cause		Date	Step	Qty		or Non-conformance	1	iief Eng		cription	Date	Verification	QC Inspector
Doc/Data		Date	step	Qty		of Non-comormance		nei Liig	Desc	ription	Date	Vermedion	QC IIISPECTOR
Equip/Tooling			,										
Operator													
Material	\vdash												
Setup													
Other													
Process													
Supplier													
Training	_	-											
Unapproved				<u> </u>	İ		<u> </u>						
						· · · · · · · · · · · · · · · · · · ·	AUL	T CATE	GORY				
Landi	ng (ı				General		10:			Ovalized		Pressure/Forced
	\vdash	Bending			0/5	Bend BOM/Bouts	-	Grain		-	Over/Under	toloranco	Temperature/Cure
	\vdash	Centre No Cracks	ot Concer	ntric to	U/\$ -	BOM/Route Broken/Damaged	-	Hardwa	on Incomplete		Part Incorre	⊢	Weld
	\vdash	Cracks Crushed/	Crimpod		<u> </u>	Burrs	-	1	on incomplete ions Incomplete/	/Unclear	Part Lost/M	 	Wrong Stock Pulled
	\vdash	Cuffs	chinpeu.		-	Contamination	\vdash	Mainte	•	- Officient	Part Moved	_	
	\vdash	Heat Trea	t		<u> </u>	Countersink		Mislabe		 	Positioned		
	\vdash	Inspection		Tube	-	Cut Too Short		Misread			Power Loss		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

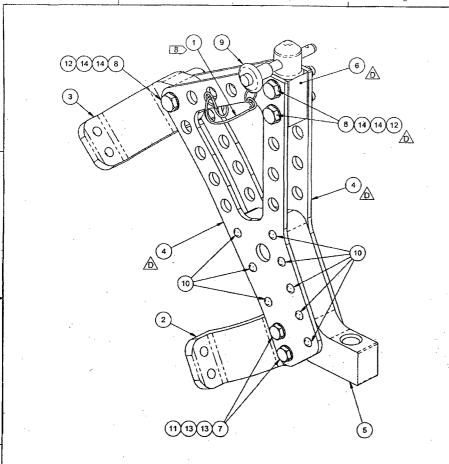
Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



D4148-041 FWD X-TUBE LUG ASSY

Α

D

NOTES:
1) MATERIAL: N/A
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
1 SPECIFICATION: IDENTIFY WITH DART P/N "D4148-041" PER DAF

5) BREAK SHARP ELOCES: TWA 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4148-041" PER DART QSI 044 6.1 7) WEIGHT: 3.67 lbs 8) ATTACH D2690-6 TO D4148-1 BY LOOPING AROUND A LIGHTENING HOLE FIRST AND THEN SECURE TO MS17984-C413

QTY -041 ITEM DESCRIPTION D4148-041 FWD X-TUBE LUG ASSY D2690-6 LANYARD X-TUBE LUG MOUNTING LUG D3910-1 D4091-1 D4148-1 FWD X-TUBE LUG PLATE D4148-3 STUD RECEIVER LOWER D4148-5 EYEBOLT STUD AN3C12A AN4C13A MS17984-C413 MS20615-4M18 MS21043C3 PIP PIN 10 RIVET 11 NUT 3 MS21043C4 12 NUT 13 NAS1149C0332R WASHER WASHER 14 6 NAS1149C0432R

					. 1					
D	HOLE C CHANG MS2104 AN4C13 1,C4-2)	DIA CHANGED ED TO 0.250" (I3C3 AND QTY IA, MS21043C4	FO 0.252* (D8-3); HOLE DIA C8-5); REPLACED QTY(2) AN3C12A, 4) NAS1149C0332R WITH QTY(2) AND QTY(4) NAS1149C0432R (D3-	sc	11.02.22					
С	ISSUES	WITH D350-59	/-3 TO ADDRESS COMPATIBILITY	мв	10.10.12					
В			20915-44418 WITH GTY(2) EACH AND GTY(4) NAS1148C0332R -2 & B4-2); MS20815-4M18 WAS -1 & B7-2); Ø0.1912 PL REPLACES ; Ø0.192 PL WAS 10 PL (ZN A7-3); 1 C8-5); 0-607-2 REV. B.	мв	10.07.05					
Α	NEW IS	SUE		MB	10.06.18					
REV.			ESCRIPTION BY DATE							
DESIGN	4	MB	DART AEROSPACE LTD							
DRAW	J	sc	HAWKESBURY, ONTAR							
CHECK	ED	1	DRAWING NO.		REV. D					
MFG. A	PPR.	6216	D4148 SHEET							
APPRO	VED	MA	TITLE SCALE							
DE APF	'nR.	-#	FWD X-TUBE LUG ASSY NTS							
DATE	11.0	2.22	COPYRIGHT © 2010 BY DARY AEROSPACE LTD THIS DOCUMENT OF PRIVATE AND CONTENTION IN C. B. LETTLES ON THE CONTENT OF THIS TO THE TOTAL AND CONTENTION OF COMMENT OF THE PRIVATE OR CONTENTION OF THE CONTENTION OF TH							

FWD X-TUBE LUG ASSY

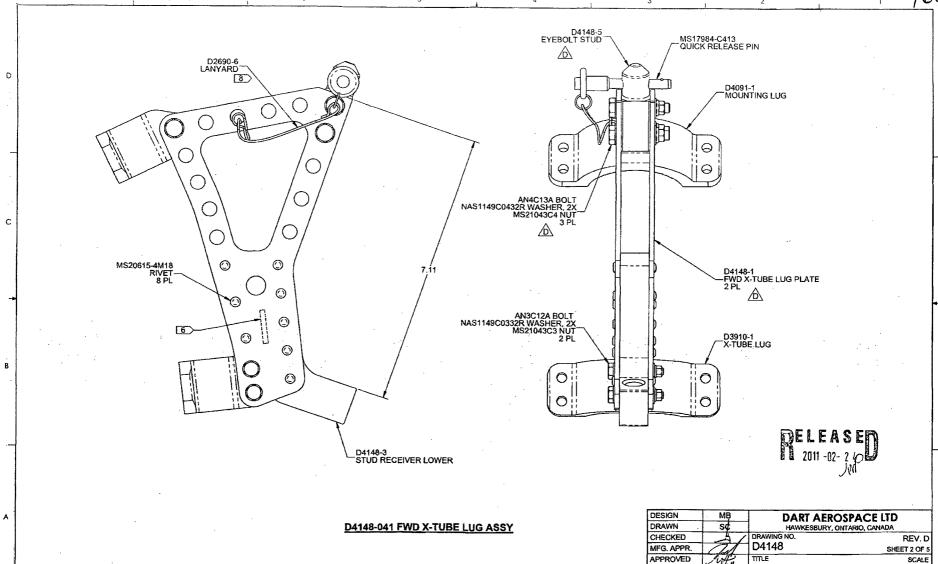
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DATE

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